

Appln. No. 10/518,950
Amdt. Dated May 27, 2009
Reply to Office Action of November 28, 2008

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A safety arrangement for a medical needle having a mount end and a sharp tip, which arrangement comprises:
 - a support adapted directly or indirectly to carry the mount end of a needle so that the needle projects-has a part projecting forwardly away therefrom;
 - a sleeve mounted directly or indirectly on the support and being slideable with respect thereto from an initial position where the sleeve fully covers at least the greater projecting part of a carried needle to a retracted position where the tip of a carried needle and a part of the needle back from its tip is exposed, and then to a protecting position corresponding to the initial position and where the sleeve again covers the needle tip and at least projecting part of the needle back from its tip;
 - resilient means arranged to urge the sleeve towards its protecting position;
 - a blocking member at least a part of which projects forwardly from the support, the blocking member being movable between a non-blocking position where the blocking member extends generally parallel to the needle axis and the sleeve may slide to its retracted position and a blocking position where the blocking member has moved from-lies at an acute angle to its non-blocking position so as to be-and is disposed between the support and a part of the sleeve, thereby blocking movement of the sleeve away from its protecting position; and
 - control means which releases-maintains the blocking member for movement from-in its non-blocking position during movement of the sleeve from its initial position to its retracted position but during movement of the sleeve from its retracted position releases the blocking member for movement to its blocking position-on movement of the sleeve away

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~~from its initial position towards its retracted position, so that and on subsequent movement of the sleeve to its protecting position the blocking member will thereafter block-blocks~~ movement of the sleeve away from its protecting position.

2. (Original) A safety arrangement as claimed in claim 1, wherein the blocking member when in its blocking position extends at an acute angle to the needle axis.

3. (Original) A safety arrangement as claimed in claim 2, wherein the blocking member is tubular and when in its non-blocking position is generally co-axial with the sleeve and needle.

4. (Previously Presented) A safety arrangement as claimed in claim 1, wherein one end of the blocking member when in its blocking position co-operates with a wall portion of one of the support and the sleeve to apply a turning moment to the blocking member about an axis transverse to the length of the sleeve, so moving the second end of the blocking member to block retracting movement of the sleeve.

5. (Original) A safety arrangement as claimed in claim 4, wherein one end of the blocking member has an off-set boss projecting towards said adjacent wall portion of said one of the support and the sleeve, whereby on the one end of blocking member being urged towards said adjacent wall portion, the off-set projection applies said turning moment to the blocking member.

6. (Original) A safety arrangement as claimed in claim 4, wherein said wall portion has an off-set boss projecting towards the adjacent one end of the blocking member, whereby on said one end of the blocking member being urged towards said wall portion, the off-set projection applies said turning moment to the blocking member.

7. (Original) A safety arrangement as claimed in claim 4, wherein one end of the blocking member presents a non-radial face to said adjacent wall portion of said one of the support and the sleeve, whereby on the one end of blocking member being urged towards

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said adjacent wall portion, the non-radial face applies said turning moment to the blocking member.

8. (Original) A safety arrangement as claimed in claim 4, wherein said wall portion presents a non-radial face to the adjacent one end of the blocking member, whereby on said one end of the blocking member being urged towards said wall portion, the non-radial face applies said turning moment to the blocking member.

9. (Previously Presented) A safety arrangement as claimed in claim 1, wherein said support includes a bore in which is receivable a hypodermic syringe having said needle mounted on the forward end thereof such that when the syringe is received within said bore, the needle projects forwardly into the sleeve.

10. (Original) A safety arrangement as claimed in claim 9, wherein the sleeve is slidably mounted externally on the support.

11. (Original) A safety arrangement as claimed in claim 9, wherein the sleeve is slidably received within a tubular carrier, which carrier is mounted on said support.

12. (Previously Presented) A safety arrangement as claimed in claim 10, wherein the forward end of the sleeve has a generally radial inwardly directed flange having a central aperture through which the tip of the needle may project when the sleeve is in its withdrawn position.

13. (Previously Presented) A safety arrangement as claimed in claim 9, wherein the blocking member is slidably carried on the sleeve but slides off the sleeve under the action of the resilient means to move to its blocking position when released by the control means.

14. (Previously Presented) A safety arrangement as claimed in claim 1 for use with a hypodermic syringe having a cylindrical body provided with a spigot at its forward end for receiving a needle having a mounting hub at its rearward end, wherein said support includes a socket for receiving the spigot of a hypodermic syringe, the support being provided with a needle to project forwardly from a mounted syringe with the needle in

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communication with the spigot, and the sleeve being slideable on the external surface of the syringe body.

15. (Original) A safety arrangement as claimed in claim 14, wherein the support has a greater diameter than the external diameter of the syringe body and the blocking member is slideable over said external diameter of the support.

16. (Previously Presented) A safety arrangement as claimed in claim 1 for use with an injection device adapted to hold a cartridge of medicament which device has a cylindrical body provided with a spigot at its forward end, wherein said support includes a socket for receiving the spigot of the device, the support being provided with a needle to project forwardly from the spigot with the rear end of the needle in communication with a cartridge carried by the device, the support having an external wall on which the sleeve is slidably supported.

17. (Original) A safety arrangement as claimed in claim 14, wherein the support has a forwardly-directed cylindrical surface of a smaller diameter than the external wall on which the sleeve is slideable, the blocking member being slidably carried on said cylindrical surface.

18. (Previously Presented) A safety arrangement as claimed in claim 1, wherein the control means includes a releasable connection between the sleeve and the blocking member.

19. (Original) A safety arrangement as claimed in claim 18, wherein movement of the sleeve towards its retracted position releases the connection to permit the blocking member to move towards its blocking position.

20. (Original) A safety arrangement as claimed in claim 19, wherein there is a secondary releasable connection between the sleeve and the blocking member displaced axially from the first-mentioned releasable connection, the secondary releasable connection being released by initial movement of the sleeve towards its withdrawn position, and the

first-mentioned releasable connection being released by further movement of the sleeve towards its withdrawn position so freeing the blocking member to move to its blocking position.

21. (Previously Presented) A safety arrangement as claimed in claim 18, wherein the releasable connection comprises inter-engaged stops respectively on the mutually sliding surfaces of the blocking member and the sleeve, which stops will over-ride each other on the application of a sufficient axial force thereto.

22. (Previously Presented) A safety arrangement as claimed in claim 1, wherein there is a control member receivable within the sleeve and which initially supports the blocking member to lie substantially coaxial with the sleeve, there being a releasable connection between the sleeve and the control member which when released by movement of the sleeve away from its initial position permits the blocking member to move to its blocking position on movement of the sleeve to its protecting position.

23. (Original) A safety arrangement as claimed in claim 22, wherein the control member is located partly within the sleeve and partly within the blocking member, when the sleeve is in its initial position.

24. (Original) A safety arrangement as claimed in claim 23, wherein the releasable connection is formed directly between the outer surface of the control member and the internal surface of the sleeve.

25. (Previously Presented) A safety arrangement as claimed in claim 22, wherein the releasable connection comprises inter-engaged stops on both the outer surface of the control member and the internal surface of the sleeve, which stops will over-ride each other on the application of a sufficient axial force thereto.

26. (Original) A safety arrangement as claimed in claim 25, wherein the resilient means acts between the control member and an internal flange formed within the blocking member and so indirectly on the sleeve through the releasable connection.

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27. (Original) A safety arrangement as claimed in claim 26, wherein the sleeve is formed with an internal stop at its forward end, the control member is a free sliding fit within the sleeve, and when the releasable connection is released, the control member moves forwardly under the action of the resilient means into engagement with the internal stop.

28. (Currently Amended) A safety arrangement as claimed in claim 22, wherein the releasable connection is formed by the control member fitting in the sleeve in a frictionally-engaging manner.

29. (Original) A safety arrangement as claimed in claim 28, wherein the resilient means surrounds the blocking member to act directly between one end of the sleeve and the blocking member.

30. (Previously Presented) A safety arrangement as claimed in claim 28, wherein the control member includes an axial projection which is received in the blocking member and is withdrawn therefrom by movement of the sleeve towards the needle tip, drawing the control member therewith.

31. (Original) A safety arrangement as claimed in claim 30, wherein the length of the axial projection is selected to control the maximum permissible movement of the sleeve towards its retracted position before subsequent movement of the sleeve in the opposite direction locks the sleeve against movement towards a retracted position.

32. (Currently Amended) A safety arrangement as claimed in claim 22, wherein the support defines a connector for a cylindrical body to extend coaxially with a needle connected thereto.

33. (Original) A safety arrangement as claimed in claim 32, wherein a connected cylindrical body serves slidably to support a sleeve moved from its initial position.

34. (Original) A safety arrangement as claimed in claim 32, wherein the support is defined by a rear wall of a tubular housing on or within which the sleeve is slidably mounted.

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35. (Previously Presented) A safety arrangement as claimed in claim 1, wherein the resilient means comprises a helical coil spring.

36. (Previously Presented) A safety arrangement as claimed in claim 1 and in combination with a needle the mount end of which is secured to the support, to project forwardly therefrom.